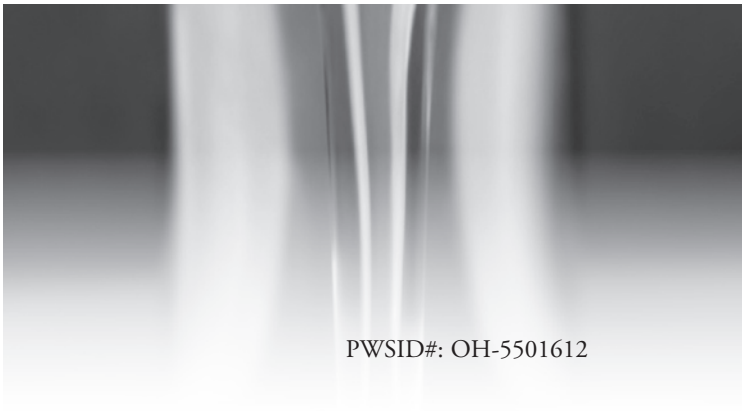
ANNUAL

WATER QUALITY REPORT

Water testing performed in 2009



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Maintaining High Standards

Once again we are proud to present our annual water quality report. This report covers all testing performed between January 1, 2009 and December 31, 2009. The events of the past few years have presented many of us with challenges we could not have imagined. Yet, in spite of this we have maintained our high standards in an effort to continue delivering the best quality drinking water possible. There may be other hurdles in the future but know that we will always stand behind you and the drinking water we work diligently to provide.

We encourage you to share your thoughts with us on the information contained in this report. Should you ever have any questions, we are always available to assist you.

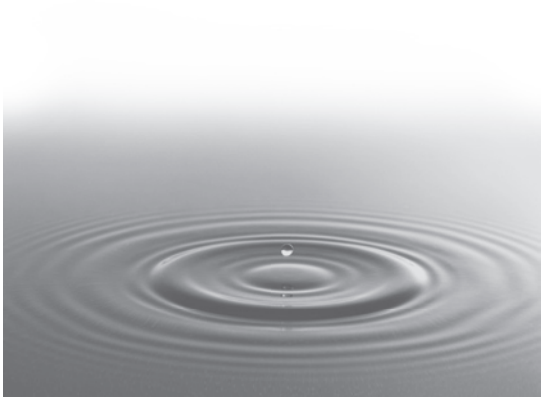
For more information about this report, or for any questions relating to your drinking water, please contact Tim Ray, Water Plant Superintendent: phone (937) 339-4826, email tim.ray@troyohio.gov, or FAX 937-339-0838.

Community Participation

You are invited to express issues concerning water quality to the Troy City Council, which meets the 1st and 3rd Monday of each month beginning at 7 p.m. in the 2nd floor Council Chambers of City Hall, 100 South Market Street, Troy, OH. Notification of any special Council Committee meeting, including the Utilities Committee, is posted on the City of Troy website: www.troyohio.gov as well as at the City Hall.

Where Does My Water Come From?

The City of Troy water customers are fortunate in that the City of Troy enjoys an abundant water supply from buried valley sand and gravel aquifers associated with the Great Miami River. The City currently utilizes ten (10) production wells to draw water from the aquifer for treatment at the Water Treatment Plant (WTP) on Staunton Rd. They range from 16 to 38 inches in diameter, and have screened intervals in the aquifer between 44 feet and 132 feet in depth. Well water is pumped to the WTP, where it is softened, clarified, stabilized, disinfected and filtered, prior to being pumped to our water customers. This aquifer is constantly being replenished from various underground sources and through riverbed filtration. In 2009, our treatment facilities provided approximately 1.408 billion gallons of clean, clear drinking water to our customers residing in Troy and surrounding communities.



Substances That Could Be in Water

To ensure that tap water is safe to drink, U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it can acquire naturally occurring minerals, in some cases, radioactive material; and substances resulting from the presence of animals or from human activity. Substances that may be present in source water include: Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife; Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and may also come from gas stations, urban stormwater runoff, and septic systems; Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Source Water Protection

The City of Troy developed and implemented a groundwater monitoring protection program in 1984. There are 14 monitoring wells currently used to study groundwater quality upgradient of the aquifer area supplying our wells. This serves as an "Early Warning" tool should dangerous contaminants threaten our existing wells. In 1992, Troy developed a Wellhead Protection Program, which serves to inventory potential sources of ground water contamination within a 5-year "time of travel" zone around our existing wells. Zoning regulations have been adopted to further reduce the risk of groundwater contamination within a 1-year time-of-travel zone around our wells. Public information will play a key role in providing additional risk reduction to protect this very important resource. A Source Water Assessment Plan (SWAP) is part of the City of Troy wellhead protection and monitoring program, and is now available at our office. This plan is an assessment of the delineated area around our listed sources through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area, and a determination of the water supply's susceptibility to contamination by the identified potential sources. In 2010, this SWAP will undergo a complete review and an update of inventories of potential contaminant sources.

According to the Source Water Assessment Plan, our City of Troy water system has a susceptibility rating of 'high'. City of Troy public water wells are located in the permeable sand and gravel deposits beneath the floodplain of the Great Miami River, with intake screens at depths of approximately 45-130 feet. There is not a known continuous confining layer (clay) between the upper aquifer (top 25 feet) and this deeper aquifer, thus creating the 'high' susceptibility rating of the deeper aquifer to contaminant flow. If you would like to review the Source Water Assessment Plan, please feel free to contact our office during regular office hours.

What Are PPCPs?

When cleaning out your medicine cabinet, what do you do with your expired pills? Many people flush them down the toilet or toss them into the trash. Although this seems convenient, these actions could threaten our water supply.

Recent studies are generating a growing concern over pharmaceuticals and personal care products (PPCPs) entering water supplies. PPCPs include human and veterinary drugs (prescription or over-the-counter) and consumer products, such as cosmetics, fragrances, lotions, sunscreens, and house cleaning products. Over the past five years, the number of U.S. prescriptions increased 12 percent to a record 3.7 billion, while nonprescription drug purchases held steady around 3.3 billion. Many of these drugs and personal care products do not biodegrade and may persist in the environment for years.

The best and most cost-effective way to ensure safe water at the tap is to keep our source waters clean. Never flush unused medications down the toilet or sink. Instead, check to see if the pharmacy where you made your purchase accepts medications for disposal, or contact your local health department for information on proper disposal methods and drop-off locations. You can also go on the Web at www.Earth911.com to find more information about disposal locations in your area.

Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council, bottled water is not necessarily cleaner or safer than most tap water. In fact, about 25 percent of bottled water is actually just bottled tap water (40 percent according to government estimates).

The Food and Drug Administration is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Further, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to $1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water.

For a detailed discussion on the NRDC study results, check out their Web site at www.nrdc.org/water/drinking/bw/exesum.asp.

Water Treatment Process

The treatment process consists of a series of steps. First, raw water is drawn from our well fields and sent to our water plant on Staunton Road. Troy's ground water has a hardness ranging from 330 ppm to 420 ppm, expressed as CaCO3. Our lime/soda softening plant then utilizes gravity flow to move the water through the entire treatment process, eliminating the need for costly electrical power for the pumping of water or chemicals. Once at the plant, the water proceeds through a primary upflow clarifier basin train, where lime (calcium oxide) and soda ash are added to remove hardness, iron and manganese. The addition of these substances raises the pH to a minimum of 10.6 and causes small particles to adhere to one another (called "floc") making them heavy enough to settle. Treated water flows to a secondary upflow clarifier for further floc settling. Settled floc is removed automatically and stored in lagoons, to be eventually applied to local farm fields as a soil amendment. Settled water is then restabilized (pH reduced to 8.7-8.9) by the addition of carbon dioxide, and chlorine is added as a disinfectant. Finally, the water is filtered through layers of fine anthracite coal and silicate sand. As smaller, suspended particles are removed, turbidity disappears and clear, clean water emerges.

Chlorine is added prior to filtration as a precaution against any bacteria that may be present. (We carefully monitor the amount of chlorine, adding the lowest quantity necessary to protect the safety of your water without compromising taste.) Finally, the softened water (with a hardness of 120 ppm to 130 ppm, expressed as CaCO3) is pumped to sanitized, underground reservoirs, distribution mains, elevated water storage towers and into your home or business.

The Year 2009 in Review for the City of Troy Water Treatment Plant

The City of Troy Water Treatment Plant (WTP) pumped a total of 1,408,132,000 gallons of clean, clear water to our distribution system for the period of January-December 2009. This includes 173,880,000 gallons pumped to the Village of West Milton, and 141,637,000 gallons pumped to Miami County residents outside the city limits of Troy. Additional statistics for the WTP and the Water Distribution Department include these highlights: 1) 4,769 feet of new or replaced water main installed; 2) 38 water main breaks repaired; 3) leak detection surveys revealed 17 water main leaks with projected flows of 162,500 gallons per day; these were repaired; 4) 43 new water taps were made; 5) Stanfield Rd. 1/2-MG Water Tower underwent renovation and repainting; 6) Barnhart Rd. 2-MG Water Tower underwent interior renovations; 7) the Automatic Meter Reading (AMR) system installation and activation was completed.

The WTP is a 24-hour, 365-day-a-year operation, employing 5 shift operators, 1 plant mechanic, 1 lab/operations technician, an Assistant Superintendent, and a Superintendent. The Water Distribution Department employs 4 distribution servicemen and a Utilities Foreman. The combined WTP/Water Distribution budget for 2009 totaled $4,194,670.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or www.epa.gov/safewater/hotline/.

Lead and Drinking Water

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

City of Troy Water Plant does triennial sampling for both lead and copper. The most current sampling period was 2007, and no detections were found for either lead or copper in the 30 samples taken and analyzed. The next sampling for both lead and copper by the City of Troy will be conducted in June 2010.

Information on the Internet

The U.S. EPA Office of Water (www.epa.gov/watrhome) and the Centers for Disease Control and Prevention (www.cdc.gov) Web sites provide a substantial amount of information on many issues relating to water resources, water conservation and public health.

Sampling Results

During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. The state allows us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine[1] (ppm)	2009	[4]	[4]	0.82	0.3–1.4	No	Water additive used to control microbes
Fluoride[2] (ppm)	2009	4	4	0.447	NA	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA] (ppb)	2009	60	NA	7.68	NA	No	By-product of drinking water disinfection
Nitrate (ppm)	2009	10	10	0.315	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2009	80	NA	18.8	17.6–18.8	No	By-product of drinking water chlorination

UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromodichloromethane (ppb)	2009	3.1	2.3–3.8	By-product of disinfection and component of Total Trihalomethanes show above.
Bromoform (ppb)	2009	1.1	0.7–1.5	By-product of disinfection and component of Total Trihalomethanes show above.
Chloroform (ppb)	2009	1.9	1.3–2.6	By-product of disinfection and component of Total Trihalomethanes show above.
Dibromochloromethane (ppb)	2009	3.2	2.4–3.8	By-product of disinfection and component of Total Trihalomethanes show above.

[1] Footnote for City of Troy Water Treatment Plant: The value of 0.82 ppm as "Amount Detected" is the running annual average of the routine chlorine residual samples taken 25 times per month from the City of Troy water distribution system from January 1, 2009, through December 31, 2009.

[2] Footnote for City of Troy Water Treatment Plant: This is the amount detected as naturally-occurring in the City of Troy raw well water, and remains in the finished water. The City of Troy WTP does not add fluoride during the treatment process.

We have a current, unconditioned license to operate our water system. The cost to the City of Troy, payable to the Ohio EPA, for this license to operate throughout 2010 is $12,250.76 and is based upon the total number of service connections, which at the time of license invoicing was 10,561.

Definitions

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.